

Measurement of the Proton Flux in Cosmic Rays with the DAMPE Experiment

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Abstract content

The Dark Matter Particle Explorer (DAMPE) is a high energy astroparticle satellite launched on the 17th December 2015 into a sun-synchronous orbit at an altitude of 500 km. The DAMPE detector consists of a double layer of Plastic Scintillator strips Detector (PSD), followed by a Silicon-tungsten TracKer-converter (STK), a Bismuth Germanium Oxide electromagnetic calorimeter (BGO) and a NeUtron Detector (NUD). The main scientific objective of DAMPE is to search for possible Dark Matter signatures through detecting electrons and photons in a wide energy range from 5 GeV up to 10 TeV with unprecedentedly high energy resolution. Moreover, the DAMPE satellite will contribute to a better understanding of the origin and propagation mechanisms of high energy cosmic rays via the measurements of fluxes of nuclei up to hundreds of TeV. In this contribution, the latest result of the measurement of the proton component of cosmic-rays is discussed.

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